

In the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Original) A method for manufacturing a package, comprising steps of:
providing a substrate having an opening and a bottom surface formed with a plurality of bond pads;
disposing a metal slice on the bottom surface of the substrate to cover the opening and the bond pads on the bottom surface of the substrate;
disposing a die on the metal slice inside the opening or above a top surface of the substrate outside the opening;
forming a plurality of bond wires between the top surface of the die and the top surface of the substrate to electrically connect the die to the substrate;
forming an encapsulating mold compound to cover the die, the bond wires, and a part of the top surface of the substrate; and
removing a part of the metal slice to form a metal heat slug thermally connected to the die and to expose the bond pads.
2. (Original) The method according to claim 1, further comprising a step of forming a plurality of solder balls flush with each other on the bond pads after the step of removing the part of the metal slice.

3. (Original) The method according to claim 2, wherein a thickness of the metal heat slug is smaller than a height of each of the solder balls.

4. (Original) The method according to claim 1, wherein the step of disposing the metal slice on the bottom surface of the substrate comprises the step of:
using an adhesive agent to dispose the metal slice on the bottom surface of the substrate.

5. (Original) The method according to claim 1, wherein the step of disposing the die on the metal slice inside the opening comprises the steps of:
using an adhesive agent to dispose the die, which has a bottom area smaller than a dimension of the opening, on the metal slice inside the opening; and
filling another adhesive agent into a gap between the die and a sidewall of the opening.

6. (Original) The method according to claim 1, wherein the step of disposing the die on the metal slice inside the opening comprises the steps of:
using an adhesive agent to dispose the die, which has a bottom area equal to a dimension of the opening, on the metal slice inside the opening.

7. (Original) The method according to claim 1, wherein the step of disposing the die above the top surface of the substrate outside the opening comprises the steps of:
using an adhesive agent to dispose the die, which has a bottom area greater than a dimension of the opening, on the top surface of the substrate outside the opening; and

filling the adhesive agent in the opening between the die and the metal slice.

8. (Original) The method according to claim 7, wherein the die is thermally connected to the metal heat slug by the adhesive agent.

9. (Original) The method according to claim 1, wherein the metal slice is made of copper.

10. (Original) The method according to claim 9, wherein the metal heat slug is made of copper.

11. (Original) The method according to claim 1, wherein the step of removing the part of the metal slice comprises the step of:

etching the metal slice to form a metal heat slug that is thermally connected to the die.